	Application No.	Applicant(s)	
Notice of Allowability	09/760,339	CHAPPEL ET AL.	
	Examiner	Art Unit	
	Scott L. Jarrett	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *May 5, 2006*.

2. ☒ The allowed claim(s) is/are *1,3-5,9-11,13,14,16-18,20,22-24 and 28*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
        Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Mr. Ross T. Robinson (Reg. No. 47,301) on May 16 and 17, 2006.

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in

this application.

Listing of Claims:

1.   (Currently Amended) A method for assessing stability of a structure of a project application, the method comprising:
collecting data of the project application, the data being structured as branches and leaves for generating leaf and branch metrics;
wherein the project application is a requirements document;
computing from the project application data the leaf and branch metrics;
computing at least two project application progress parameters based upon the leaf and branch metrics for numerically describing elements of the project application;
wherein the project application progress parameters include at least one of the following:
total number of branches;
total number of leaves;
number of modifications performed on the branches;
number of modifications performed on the leaves;
average age of leaves in the project; and
average age of branches in the project;
computing regression parameters based upon the at least two project application progress parameters wherein the two application project progress parameters are based upon the leaf and branch metrics;

computing correlation coefficients utilizing the regression parameters, the correlation coefficients describing the strength of the correlation of the at least two project application progress parameters with the leaf and branch metrics for indicating the stability of the structure of the project application;

outputting data records to graphically represent the stability of the structure of the project application;

wherein the branches are representative of structure components of the a requirements document, and the leaves are representative of content components of the requirements document;

wherein the data of the project application comprises text; and

wherein the steps of computing the at least two project progress parameters, computing the regression parameters, computing the correlation coefficients, and collecting data of the project, and outputting the data records are performed over a computer network.

.

2.   (Canceled) The method of claim 1, wherein the project application progress parameters include at least one of the following:

total number of branches,

total number of leaves,

number of modifications performed on the branches,

number of modifications performed on the leaves,

average age of leaves in the project, and

average age of branches in the project.

3. (Previously Presented) The method of claim 1, wherein the stability of the structure of the project application is determined by utilizing at least one of the following equations:

normal equations used in regression analysis,

slope of the regression model equation,

intercept of the regression model equation, and

correlation coefficient of the regression equation.

4. (Previously Presented) The method of claim 1, further comprising the step of:

updating at least one database with data records generated from performing statistical analysis on the collected data.

5. (Original) The method of claim 4, wherein the collecting of data includes at least one of the following steps:

reading data from a data file or database; or

receiving data across a network.

6. (Canceled)

7. (Canceled) The method of claim 1, further comprising outputting the data records to graphically represent the stability of the structure of the project application.

8. (Canceled)

9. (Currently Amended) A method for analyzing stability of a structure of a project application, the method comprising:

collecting data of the project application, the data structured as branches and leaves;

wherein the project application is a requirements document;

parsing the data of the project application to produce first data records summarily describing the data of the project application and generating leaf and branch metrics;

computing from the project application data the leaf and branch metrics;

computing second data records based on the first data records, the second data records including statistical data based upon the leaf and branch metrics;

computing third data records, the third data records including statistical results based upon the second data records and being indicative of the stability of the structure of the project application;

outputting at least one of the second and third data records to graphically represent the stability of the structure of the project application;

wherein the third data records are computed using regression analysis, the regression analysis being performed based upon the leaf and branch metrics to facilitate daily project progress assessments and forecast the need for additional resources;

wherein the branches are representative of structure components of the a requirements document, and the leaves are representative of content components of the requirements document;

wherein the data of the project application comprises text; and

wherein the steps of collecting the data, parsing the data, computing the second data records, and computing the third data records, and outputting are performed over a computer network.

10. (Original) The method of claim 9, wherein the collecting of data includes at least one of the following steps:

reading data from a data file or database; or

receiving data across a network.

11. (Original) The method of claim 9, wherein the second and third data records are stored in a database.

12. (Canceled)

13. (Original) The method of claim 9, wherein the statistical results are time dependent.

14. (Previously Presented) The method of claim 9, wherein the third data records have a dependent relation between the stability of the structure of the project application.

15. (Canceled) The method of claim 9, further comprising outputting at least one of the following: the second and third data records.

16. (Original) The method of claim 9, wherein the first, second, and third data records are structured as objects.

17. (Previously Presented) The method of claim 9, wherein the project application is formatted according to a content markup language format.

18. (Original) The method of claim 9, further comprising computing correlation coefficients based upon the third data records.

19. (Canceled)

20. (Currently Amended) A system for assessing stability of a structure of a project application, the system comprising:

at least a first processor for executing processes;

at least a first memory device connected to the at least first processor; and

a plurality of processes stored on the at least a first memory device, the plurality of processes configured to cause the at least first processor to:

collect data of the project application, the data being structured as branches and leaves for generating leaf and branch metrics;

wherein the project application is a requirements document;

compute the leaf and branch metrics from the project application data;

compute at least two project application progress parameters based upon the leaf and branch metrics for numerically describing elements of the project application;

wherein the project application progress parameters include at least one of the following:

total number of branches;

total number of leaves;

number of modifications performed on the branches;

number of modifications performed on the leaves;

average age of leaves in the project; and

average age of branches in the project;

compute regression parameters based upon the at least two project application progress parameters wherein the at least two project application progress parameters are based upon the leaf and branch metrics;

compute correlation coefficients utilizing the regression parameters, the correlation coefficients describing the strength of the correlation of the at least two project application progress parameters with the leaf and branch metrics for indicating the stability of the structure of the project application;

output the data records to graphically represent the stability of the structure of the project application;

wherein the data of the project application comprises text; and

wherein the branches are representative of structure components of the requirements document, and the leaves are representative of content components of the requirements document.

21.   (Canceled) The system of claim 20, wherein the project application progress parameters include at least one of the following:

        total number of branches,
        total number of leaves,
        number of modifications performed on the branches,
        number of modifications performed on the leaves,
        average age of leaves in the project, and
        average age of branches in the project.

22.   (Previously Presented) The system of claim 20, wherein the stability of the structure of the project application is determined by utilizing at least one of the following equations:

        normal equations used in regression analysis,
        slope of the regression model equation,
        intercept of the regression model equation, and
        correlation coefficient of the regression equation.

23.   (Previously Presented) The system of claim 20, wherein the plurality of processes are further configured to cause the at least a first processor to:

        update at least one database with data records
        generated from performing statistical analysis on the collected data.

24.   (Original) The system of claim 23, wherein the at least first processor further collects data by performing at least one of the following:

        reading data from a data file or database; or
        receiving data across a network.

25.   (Canceled)

26.   (Canceled) The system of claim 20, wherein the plurality of processes are further configured to cause the at least a first processor to:

        output the data records to graphically represent the stability of the structure of the project application.

27.   (Canceled)

28.   (Currently Amended) A system for assessing stability of a structure of a project application, the system comprising:

        means for collecting data of the project application, the data being structured as branches and leaves for generating leaf and branch metrics;

        wherein the project application being a requirements document;

means for computing the leaf and branch metrics from the project application data;

means for computing at least two project application progress parameters based upon the leaf and branch metrics for numerically describing elements of the project application;

wherein the project application progress parameters include at least one of the following:

total number of branches;

total number of leaves;

number of modifications performed on the branches;

number of modifications performed on the leaves;

average age of leaves in the project; and

average age of branches in the project;

means for computing regression parameters based upon the at least two project application progress parameters wherein the two project application progress parameters are based upon the leaf and branch metrics;

means for computing correlation coefficients utilizing the regression parameters, the correlation coefficients describing the strength of the correlation of the at least two project application progress parameters with the leaf and branch metrics for indicating the stability of the structure of the project application;

means for outputting data records to graphically represent the stability of the structure of the project application;

wherein the data of the project application comprises text; and

wherein the branches are representative of structure components of the requirements document, and the leaves are representative of content components of the requirements document.

REASONS FOR ALLOWANCE

2.   The following is an examiner's statement of reasons for allowance.

The present invention is directed to a method and system for assessing and displaying the stability of the structure of a project requirements document (project application) comprising: analyzing/modeling the requirements document as a tree having branches (structure components) and leaves (content components) and generating leaf/branch metrics, progress parameters, regression parameters and correlation coefficients such that the correlation coefficients describe the strength of the correlation between the progress parameters and leaf/branch metrics and indicate the stability of the structure of the requirements document.

The closest prior art Wu, Ching-seh, Software Project Plan Tracking Intelligent Agent (2000), Paul et al., Software Metrics Knowledge and Databases from Project Management (1999) and Rational RequisitePro User's Guide Version 4.5 (1999) fail to teach or suggest either singularly or in combination graphically displaying an indication of the stability of the structure of a requirements document (project application) based on the analysis of requirement document and the generation of leaf/branch metrics, progress parameters, regression parameters and correlation coefficients (leaf/branch) metrics as recited in independent Claims 1, 9, 20 and 28.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Cordes et al., Evaluation Method for User Requirements Documents (1989) teach a method for evaluating and analyzing project requirements documents in order to improve the quality of project requirements.

- Porter et al., Empirically Guided Software Development Using Metric-Based Classification Trees (1990) teach a method and system for identifying high-risk project components (features, code, etc.) using software metrics and measures.

- Costello, Rita Jean, Metrics for requirements engineering (1994) teaches the utilization of requirement metrics to catch and help prevent project requirements errors.

- Gyorkos, Measurements in software requirements specification process (1994) teaches a method for analyzing/assessing project requirement specification documents in order to measure requirement/project risks.

- Robinson, Jeanne Minahan, Risk assessment in software requirements engineering (1995) teaches a system and method for analyzing project

requirements/requirements engineering process in order to identify risks as well as improve the requirements engineering process.

- Jones, Capers, Strategies for managing requirements creep, teaches a method for measuring the rate of change to project requirements (requirements volatility) in order to identify the extent of requirements creep.

- Pfahl et al., Using simulation to analyze the impact of software requirement volatility on project performance (2000) teach a system and method for understanding the impact of unstable requirements on project performance as well as determine "how much money should be invested in stabilizing the software requirements in order to achieve optimal cost effectiveness."

- Donald, York, An early indicator to predict requirements volatility (2001) teaches a method for assessing the volatility of project requirements in an effort to assist project managers in deciding whether or not to continue the project.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (571) 272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

/SJ
5/21/2006

TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600